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| 10/729,636 | 12/04/2003 | Paul M. Bird | SVL920030127US1/2997P | 1092 |

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| EXAMINER | |
|---|---|
| SHIN, KYUNG H | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2143 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/729,636 | BIRD ET AL. | |
| | Examiner | Art Unit | |
| | KYUNG H. SHIN | 2143 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *30 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

**NON-FINAL ACTION**

1. This action is responding to application papers filed on **12-4-2003**.

2. Claims **1 - 28** are pending. Claims **1, 8, 15, 22** are independent.

***Response to Arguments***

3. Applicant's arguments filed 11/30/2007 have been fully considered but they are not persuasive.

3.1 Applicant argues that the referenced prior art does not disclose, "a single database connection" and "a first command source identifier and a second command source identifier". (Remarks Page 11)

Oulid-Aissa discloses a single database connection (Oulid-Aissa col 10, ll 12-17: single database connection) and multiple applications accessing a database using the connection. (Oulid-Aissa Figure 2(201-206); col. 6, lines 6-10: multiple client applications to request data services via commands)

A command source identifier is an identifier for a particular application which is a source for command statement for a database. Oulid-Aissa discloses an identifier for an application and a check to verify the correct identifier is used. (Oulid-Aissa col 31, ll 15-18: check for correct application identifier) Lomet disclose multiple application identifiers such as a first and a second. (Lomet col 10, ll 19-21: unique application identifier that is unique across all applications of all clients; col 10, ll 25-30: client can run multiple applications simultaneously)

***Specification***

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR **1.75(d)(1)** and MPEP § 608.01(o). Correction of the following is required: **Claims 15 - 28** are objected as "**computer readable medium**" is not defined clearly in the specification, so that the meaning of the term in the claims is not ascertainable by reference to the specification.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims **1, 2, 4 - 16, 18 - 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Oulid-Aissa** (US Patent No. **5,835,757**) in view of **Lomet et al.** (US Patent No. **6,182,086**).

**Regarding Claims 1, 15**, Oulid-Aissa discloses a method, a computer readable medium with program instruction (Oulid-Aissa col 19, ll 42-44: software modules) for avoiding section collision (Oulid-Aissa col 10, ll 49-53: allows read and write to one database record or object instance; collision between read/write operation avoided or

controlled) for application server requests over a single database connection, the method comprising:

receiving a statement assigned a first command source identifier (Oulid-Aissa col 11, ll 50-53: general purpose data access commands, generic database access; col 31, ll 15-18: check for correct application identifier) by a database server from an application source over a single database connection (Oulid-Aissa col 10, ll 12-17: single database connection) between the database server and an application server, and receiving a second statement assigned a command source identifier by the database server from an application source over the single database connection, wherein the first statement is substantially identical to the second statement. (Oulid-Aissa col 10, ll 28-32: application command statement(s)) And, Oulid-Aissa discloses wherein executing the first statement assigned a command source identifier separately from and in parallel with the second statement assigned the second command source without section collision. (Oulid-Aissa col 11, ll 50-53: command (statement) processing; (Oulid-Aissa col 10, ll 49-53; col 12, ll 32-36: allows read and write to one database record or object instance; collision between read/write operation avoided or controlled)

Oulid-Aissa discloses a first command source identifier. (Oulid-Aissa col 31, ll 15-18: check for correct application identifier) Oulid-Aissa does not explicitly disclose a second command source identifier.

However, Lomet discloses:

(b) a second command source identifier from a second application source; (c) the second command source. (Lomet col 5, ll 1-6: client side application sends a request; server side application processes request, prepares and returns a reply to client side application; col 10, ll 19-21: unique application identifier that is unique across all applications of all clients; col 10, ll 25-30: client can run multiple applications simultaneously; when application identifier is placed into application table)

It would have been obvious to one of ordinary skill in the art to modify Oulid-Aissa as taught by Lomet a second command source identifier. One of ordinary skill in the art would have been motivated to employ the teachings of Lomet to capture client-server interactions and enable recovery of client-side applications following system crashes. (Lomet col 4, ll 54-58: " … *This invention concerns a client-server computer system having one or more clients connected to one or more servers, and techniques for capturing client-server interactions to enable recovery of client-side applications following system crashes.* … ")

**Regarding Claims 2, 16**, Oulid-Aissa discloses the method, medium of claims 1, 15, wherein (a first) command source identifier. (Oulid-Aissa Figure 2(201-206); col. 6, lines 6-10: multiple client applications to request data services via commands; col 31, ll 15-18: check for correct application identifier during processing) Oulid-Aissa does not explicitly disclose (a second) command source identifier. However, Lomet discloses wherein second command source identifiers (Lomet col. 5, lines 1-6: client side

application sends a request; server side application processes request, prepares and returns a reply to client side application; col. 10, lines 19-21: unique application identifier that is unique across all applications of all clients; col. 10, lines 25-26: client can run multiple applications simultaneously) are assigned by the application server. (Lomet col 10, ll 26-30: when application identifier is placed into application table)

It would have been obvious to one of ordinary skill in the art to modify Oulid-Aissa as taught by Lomet for a second command source identifier assigned by the application server. One of ordinary skill in the art would have been motivated to employ the teachings of Lomet in order to capture client-server interactions and enable recovery of client-side applications following system crashes. (Lomet col 4, ll 54-58)

**Regarding Claims 4, 18**, Oulid-Aissa discloses the method, medium of claims 1, 15, wherein the first statement assigned the first command source identifier and the second statement is a single statement containing the first and second application sources, wherein a portion of the single statement pertaining to the first application source is assigned the first command source identifier, and wherein a portion of the single statement pertaining to the second application. (Oulid-Aissa col 10, ll 28-32: allow an application to combine several database accesses into an atomic transaction; Figure 2(201-206); col. 6, lines 6-10: multiple client applications to request data services via commands; col 31, ll 15-18: check for correct application identifier during processing) Oulid-Aissa does not explicitly disclose the second command source identifier. However, Lomet discloses wherein the second command source identifier. (Lomet col.

10, lines 19-21: unique application identifier that is unique across all applications of all clients; col. 10, lines 25-26: client can run multiple applications simultaneously)

It would have been obvious to one of ordinary skill in the art to modify Oulid-Aissa as taught by Lomet for the second command source identifier. One of ordinary skill in the art would have been motivated to employ the teachings of Lomet in order to capture client-server interactions and enable recovery of client-side applications following system crashes. (Lomet col 4, ll 54-58)

**Regarding Claims 5, 19**, Oulid-Aissa discloses the method, medium of claims 1, 15, wherein the first application source is within a first application and the second application source is within a second application. (Oulid-Aissa Figure 2(201-206); col 6, ll 6-10: multiple client applications to request data services via commands)

**Regarding Claims 6, 20**, Oulid-Aissa discloses the method, medium of claims 1, 15, wherein the first statement assigned the first command source identifier (Oulid-Aissa col 6, ll 6-10: multiple client applications (first, second); col 31, ll 15-18: application identifier checked during processing) is a statement to open a cursor (Oulid-Aissa col 27, ll 48-50: record pointer: Spec Page 2, Lines 11-12 defines cursor to be pointer to a row in a database) and wherein the second statement assigned the second command source identifier is a statement to open the same cursor. (Oulid-Aissa col 10, ll 49-53: read or write operation to one database record or object instance, same command (open cursor) processed) Oulid-Aissa does not explicitly disclose the second command

source identifier. However, Lomet discloses wherein the second command source identifier. (Lomet col 10, ll 19-21; col 10, ll 25-30: all messages between client and server are assigned a unique application identifier; second identifier)

It would have been obvious to one of ordinary skill in the art to modify Oulid-Aissa as taught by Lomet to use a second command source identifier. One of ordinary skill in the art would have been motivated to employ the teachings of Lomet in order to capture client-server interactions and enable recovery of client-side applications following system crashes. (Lomet col 4, ll 54-58)

**Regarding Claims 7, 21**, Oulid-Aissa discloses the method, medium of claims 6, 20, wherein the executing (c) comprises:

(c1) a first source identifier. (Oulid-Aissa col 31, ll 15-18: check for correct application identifier during processing)

(c2) assigning a first query identifier to the first instance of the cursor by the database server; (Oulid-Aissa col 27, ll 48-50; col 13, ll 37-39: record pointer or cursor specifies an object instance; object identifier)

(c4) assigning a second query identifier to the second instance of the cursor by the database server; (Oulid-Aissa col 27, ll 48-50; col 13, ll 37-39: record pointer or cursor specifies an object instance; object identifier)

Oulid-Aissa discloses wherein creating a first instance of the cursor in response to the first statement assigned the command source identifier; (Oulid-Aissa col 27, ll

48-50; col 13, ll 37-39: record pointer or cursor specifies an object instance; object identifier; col 11, ll 50-53: command (statement) processing; col 31, ll 15-18: application identifier check during processing) And, creating a second instance of the cursor in response to the second statement assigned; (Oulid-Aissa col 27, ll 48-50; col 13, ll 37-39: record pointer or cursor specifies an object instance; object identifier) Oulid-Aissa does not explicitly disclose a second command source identifier.

However, Lomet discloses:

(c3) the second command source identifier (Lomet col. 10, lines 19-21: unique application identifier that is unique across all applications of all clients; col. 10, lines 25-26: client can run multiple applications simultaneously)

(c5) returning the first and second query identifiers to the application server. (Lomet col 10, ll 25-30: application identifier is placed in client's application table and on first contact with server, placed in server's applications table)

It would have been obvious to one of ordinary skill in the art to modify Oulid-Aissa as taught by Lomet to use the second command source identifier, and return query identifiers to application server. One of ordinary skill in the art would have been motivated to employ the teachings of Lomet in order to capture client-server interactions and enable recovery of client-side applications following system crashes. (Lomet col 4, ll 54-58)

**Regarding Claims 8, 22**, Oulid-Aissa discloses a method, a computer readable medium with program instructions (Oulid-Aissa col 19, ll 42-44: software modules) for avoiding section collision (Oulid-Aissa col 10, ll 49-53: allow read and write to one database record or object instance; collision between read/write operation avoided or controlled) for application server requests over a single database connection (Oulid-Aissa col 10, ll 12-17: single database connection), the method comprising:

(a) receiving a first statement to open a cursor by an database server over a single database connection (Oulid-Aissa col 10, ll 12-17: single database connection) between the database server and an application server; (Oulid-Aissa col 10, ll 28-32: command (statement) processing; col 27, ll 48-50: record pointer (or cursor) specifies an object instance)

(b) creating a first instance of the cursor in response to the first statement; (Oulid-Aissa col 27, ll 48-50: record pointer (or cursor) specifies an object instance)

(c) assigning the first instance a first query identifier; (Oulid-Aissa col 13, ll 37-39: data access routines, object instance specified by an object identifier; each object assigned an object identifier)

(d) receiving a second statement to open the same cursor by the database server over the single database connection (Oulid-Aissa col 10, ll 12-17: single database connection) before the first instance of the cursor closes; (Oulid-Aissa col 10, ll 49-53: allows read and write to one database record or object instance; collision between read/write operation avoided or controlled)

(e) creating a second instance of the cursor in response to the second statement; (Oulid-Aissa col 27, ll 48-50: record pointer (or cursor) specifies an object instance) and

(f) assigning the second instance a second query identifier. (Oulid-Aissa col 13, ll 37-39: data access routines, object instance specified by an object identifier; each object assigned an object identifier)

**Regarding Claims 9, 23**, Oulid-Aissa discloses the method, medium of claims 8, 22, wherein the first and second query identifiers are assigned by the database server. (Oulid-Aissa col 13, ll 37-39: data access routines, object instance specified by an object identifier; each object assigned an object identifier)

**Regarding Claims 10, 24**, Oulid-Aissa discloses the method, medium of claims 8, 22, further comprising: (g) processing the first instance of the cursor separately from and in parallel with the second instance of the cursor. (Oulid-Aissa col 27, ll 48-50: record pointer or cursor specifies an object instance; col 10, ll 49-53; col 12, ll 32-36: allows parallel read and write to one database record or object instance; collisions controlled; col 12, ll 32-36: DBIF can handle several requests in parallel)

**Regarding Claims 11, 25**, Oulid-Aissa discloses the method, medium of claims 8, 22. Oulid-Aissa does not explicitly disclose returning the query identifiers to the application server. However, Lomet discloses further comprising: (g) returning the query identifiers

to the application server. (Lomet col 10, ll 25-30: application identifier is placed in client's application table and on first contact with server, placed in server's applications table)

It would have been obvious to one of ordinary skill in the art to modify Oulid-Aissa as taught by Lomet to return the query identifiers to the application server. One of ordinary skill in the art would have been motivated to employ the teachings of Lomet in order to capture client-server interactions and enable recovery of client-side applications following system crashes. (Lomet col 4, ll 54-58)

**Regarding Claims 12, 26**, Oulid-Aissa discloses the method, medium of claims 11, 26, wherein subsequent statements received by the database server for the first instance of the cursor comprises the first query identifier. (Oulid-Aissa col 10, ll 28-32: object instance specified by an object identifier; each object instance has its own identifier)

**Regarding Claims 13, 27**, Oulid-Aissa discloses the method, medium of claims 11, 25, wherein subsequent statements received by the database server for the second instance of the cursor comprises the second query identifier. (Oulid-Aissa col 27, ll 48-50; col 13, ll 37-39: record pointer or cursor specifies an object instance; object identifier)

**Regarding Claims 14, 28**, Oulid-Aissa discloses the method, medium of claims 8, 22, wherein the first statement (Oulid-Aissa col 11, ll 50-53: general purpose data access

commands, generic database access) is from an application source and is assigned a command source identifier (Oulid-Aissa col 31, ll 15-18: check for correct application identifier), wherein the statement is from an application source and is assigned a command source identifier. (Oulid-Aissa col 11, ll 50-53; col 31, ll 15-18) Oulid-Aissa does not explicitly disclose a second command source identifier. However, Lomet discloses wherein a second command source identifier. (Lomet col 10, ll 19-21; col 10, ll 25-30: all messages between client and server are assigned a unique application identifier; second identifier)

It would have been obvious to one of ordinary skill in the art to modify Oulid-Aissa as taught by Lomet to use a second command source identifier. One of ordinary skill in the art would have been motivated to employ the teachings of Lomet to capture client-server interactions and enable recovery of client-side applications following system crashes. (Lomet col 4, ll 54-58)

7. Claims **3, 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Oulid-Aissa-Lomet** and further in view of **Kavner et al.** (US Patent No. **6,430,607**).

**Regarding Claims 3, 17**, Oulid-Aissa discloses the method, medium (Oulid-Aissa col 19, ll42-44: software modules) of claims 1, 15. (Oulid-Aissa col x, ll x: client application(s), request processing; col 31, ll 15-18: check for correct application identifier during processing) Oulid-Aissa does not explicitly disclose different application sources within a same application. However, Kavner discloses different

application sources within a same application. (Kavner col 4, ll 5-11: allows client to concurrently execute multiple remote requests within the same thread of execution (process or application))

It would have been obvious to one of ordinary skill in the art to modify Oulid-Aissa as taught by Kavner for different application sources within a same application. One of ordinary skill in the art would have been motivated to employ the teachings of Kavner to perform other tasks while waiting for a response to request. (Kavner col 2, ll 33-39: *" … As explained above, conventional remote procedure calls do not return control to the application program until the server has completed a request. Consequently, the client application suspends operations until it receives a response from the server. This may result in substantial delays, … "; col 2, ll 42-44: " … As a result, the client application wastes processor cycles while waiting for a response from the server…. "; col 3, l 66 - col 4, l 1: " … Returning operating control to the client before receiving a response from the server, allows the client to perform other tasks while waiting for the response. … "*)

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KYUNG H. SHIN whose telephone number is (571)272-3920. The examiner can normally be reached on 9:30 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kyung Hye Shin
Examiner
Art Unit 2143

KHS
February 18, 2008

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